



Norman H. Bangerter
Governor

Dee C. Hansen
Executive Director

Dianne R. Nielson, Ph.D.
Division Director

State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

355 West North Temple
3 Triad Center, Suite 350
Salt Lake City, Utah 84180-1203
801-538-5340

February 8, 1993

TO: Minerals File

FROM: D. Wayne Hedberg, Permit Supervisor *DWH*

RE: Site Inspection, 5M Incorporated, Silver Reef Mine, M/053/002,
Washington County, Utah

Date of Inspection: February 4, 1993
Time of Inspection: 11:30 a.m. - 3:00 p.m.
Conditions: Sunny, cool
Participants: Larry Gore, BLM; Pete Stevenson, EPA; Dick Wiltshire and
Dave Jennings, U.S. Bureau of Reclamation; Tony Gallegos, and
Wayne Hedberg, DOGM

Purpose of Inspection: To discuss recommended measures required to secure, stabilize
and reclaim the Silver Reef Mine Site.

We arrived at the Silver Reef site and found the BLM, EPA and Bureau of Reclamation representatives making preliminary evaluations of the site. Tony and I accompanied the group on a walkover of the area starting from the north end of the processing area and progressed to the south end of the site. We learned that a more recent land ownership assessment by the BLM, indicates that a significant portion of the processing facilities area may be located upon BLM managed lands.

The processing ponds were as full as we have ever seen them due to the heavy rainfall that has occurred locally. The pregnant solution pond was overflowing (through its overflow pipe) into the lower lined pond at the time of our inspection. A flow rate of approximately 1-3 gpm was visually estimated. The lower pond was not overflowing at the time of our inspection. It appeared to be maintaining a relatively stable level with approximately 8-10 feet of freeboard.

The drainpipes from the leach pad were trickling fluids into the pregnant solution pond. The lower 2-3 feet of the pad base was saturated. The lower earthen pond also showed signs of significant water ponding (principally surface runoff from disturbed and undisturbed areas adjacent to the lower processing area).

Page 2
Site Inspection
Silver Reef Mine
M/053/002
February 8, 1993

The irrigation canal was running water due to the recent precipitation and subsequent runoff. The canal drains principally into the irrigation/stock pond located approximately 200 yards to the southwest of the processing facilities area. Water was also running in the drainage below (southeast) the "wetland area" and temporarily ponding behind the backfilled debris dam adjacent to the California Mine shaft. The water was percolating into the fill (and backfilled shaft?).

During our visit we observed an owl and a redtail hawk in the vicinity of the lower wetland and older irrigation pond area south of the Hidden Valley Water Users well. Other fresh animal tracks (deer, coyote/dog, rabbits, etc.) were observed in the soft mud within and around the mine site.

A Design Engineering Report will be prepared by the U.S. Bureau of Reclamation under EPA contract. The report may take 2-3 months to prepare the first draft. The EPA will then send the draft to the BLM and DOGM for their comment and input. The EPA will also solicit input from the respective regulatory agencies as the preliminary draft reports are prepared.

The EPA indicated that the principal scope of the engineering design report will involve the leach pad area, ore/tailings stockpiles, process ponds, and cleanup of the transformers. The contaminated well issue will probably not be addressed as part of this report. This may be left for the state to resolve.

It is believed that the well contamination is probably a result of natural background contamination from ground water circulating through the older honeycombed flooded mines in the general area that are host to uranium deposits. Drilling deeper and isolating/sealing off the upper affected aquifer(s) may resolve or reduce the contamination. Other solutions may include locating an alternate water source, or rerouting, containing and treating (as necessary) the irrigation canal water presently recharging the local wetlands and groundwater system.

After the EPA and Bureau of Reclamation personnel left, we assisted the BLM in locating some section corners in the northern end of the reef. The warehouse had been secured by the EPA with a chain and lock before they left. Previous EPA laboratory analyses indicated that the vandalized transformers stored inside the warehouse building contain PCB's which may ultimately require incineration. A series of photos were taken to document some of the observations noted during the inspection.

jb
M053002.1

cc: Jason Knowlton, OERR
Larry Lane, BLM, Dixie RA
Lawell Braxton, DOGM